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Conflicting values and their impact on learning

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Based on Inglehart's (1997) idea that the importance of modern values is challenged by a growing importance of postmodern values in postindustrialised societies, we analyse the consequences of students' attempts to integrate (modern) achievement values and (postmodern) well-being values. Since opportunities for value integration are limited, students should frequently experience conflicts, whether to work for school or to engage in free time activities. In a questionnaire study, students (n=184) showed mostly high scores in both, achievement and well-being values. Value conflict – measured by a specific conflict formula – was related to the frequency of action conflicts as well as to the reported difficulty to decide which action to pursue. Values predicted the students' school-related decisions. Furthermore, students with high achievement values reported better performance in school-related tasks than students with high well-being values. Finally, values were systematically related to time investment and grades.

Introduction

The value concept in educational psychology

Societal values are a key concept in social as well as cross-cultural psychology. Researchers in these areas believe that values are an integrative concept, which can be used to describe and explain basic aspects of human motivation and behaviour (Hitlin & Piliavin, 2004; Seligman, Olson, & Zanna, 1996; Smith & Schwartz, 1997). Despite the prominent role of societal values in these areas, little is known about the influence of societal values on learning at school. In this article, we intend to show that – despite of their generality – societal values validly predict various aspects of students' behaviour in school and out of school settings.

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In educational psychology, the concept of value is mostly used with a fundamentally different meaning. Various approaches can be distinguished along a dimension reflecting the specificity versus generality of the objects being valued. On the most specific level, values refer to single objects or actions. Values are treated as perceptions of the incentives given in a situation. For example, a student can perceive an exam as giving him/her an opportunity to test his/her competencies and, therefore, attach a positive value to it. Incentives or, more precisely, the valence of the action to be performed and of the outcome to be achieved are focal to this approach. This conception of values – which can be traced back to the works of Lewin (1951) – lies at the very heart of the classic expectancy-value theories in motivation research, such as for example the model of Atkinson (1957; see also Heckhausen, 1991). But also the highly influential concepts of intrinsic and extrinsic motivation (e.g., Deci & Ryan, 2002; Sansone & Harackiewicz, 2000) as well as situational interestingness of objects (e.g., Hidi & Baird, 1986) can be subsumed under this concept of value as they are defined as states of the individual depending on the qualities of specific actions/objects being valued. Such a conceptualisation of values can be labelled the specific object/action approach. For reasons of clarification the term value, as it is applied in this approach, should better be replaced by the more precise notion of incentives or valences.

The second approach conceptualises values on a more general level. The basic proposition of this approach (although most of the time not explicitly stated) is that actions and objects can be grouped according to the domains they are belonging to (e.g., all learning activities a student performs in the subject of mathematics). In research corresponding to this approach, students are typically asked how much they value various school subjects (e.g., chemistry, mathematics, sports, etc.). Especially in the field of the expectancy-value model by Wigfield and Eccles (cf. 2000), but also in the person-object theory of interest (cf. Krapp, 2002) the term "value" is used in this sense. Typical research questions address the changing of values attached to different subjects during an individual's school career (e.g., Jacobs, Lanza, Osgood, Eccles, & Wigfield, 2002) or the relation of interest within a domain to aspects of learning (e.g., Krapp & Lewalter, 2001). This conceptualisation of values can be labelled the domain approach.

Educational psychology has concentrated on the second and – to a lesser degree – the first approach. Both approaches contribute to an understanding of the processes and effects of actual motivation (e.g., Hidi & Baird, 1986; Vollmeyer & Rheinberg, 2000) as well as into the development of the evaluation of school domains (e.g., Jacobs et al., 2002). However, societal influences on school motivation can hardly be modelled in these approaches. Therefore, a new approach conceptualising values on a more general level is needed for educational psychology, which may be build on research from social and cross-cultural psychology. In these fields values are defined as shared beliefs referring to desirable goals (or modes of conduct in order to achieve those goals). Values transcend actions and situations. They serve as standards to guide and substantiate behaviour (Smith & Schwartz, 1997; Hitlin & Piliavin, 2004). Despite their reference to desirable goals, values can be distinguished from goals by their generality. Whereas goals refer to a specific content and mostly to specific situations, values apply across situations and domains. Besides, values are normative in the sense that a person who holds a certain value, would prefer everybody to agree on the importance of that value. The same does not apply to goals, since individuals do not perceive their goals as appropriate for everyone. Finally, values can be distinguished from goal orientations, since the latter is a scientific reconstruction of habitually preferred goals (e.g., achievement goal orientation; cf. Urdan, 1997), whereas values are cognitively represented by the individual. Typical examples for values are universalism, security or achievement (Schwartz, 1992). They can be analysed on a cultural as well as on an individual level. According to this approach, values are not restricted to specific actions, objects or domains, but the value content can be applied to all aspects of a person's life. Research following such a conceptualisation of values can be labelled as the general level approach. Major proponents of this approach search for universally valid sets of values (e.g., Rokeach, 1973; Schwartz, 1992) or elaborate on specific dichotomies of values (e.g., Hofstede, 1980; Markus & Kitayama, 1991, for works on individualism and collectivism).

In educational psychology the general level approach has not stimulated a lot of studies so far, although people largely agree on general values having an impact on scholastic learning. One important work bringing together societal values and achievement motivation has already been conducted by McClelland in 1961. According to his studies, cultural values have an influence on the development of achievement motives on the level of societies. Besides this early approach focussing on motives, cultural influences on learning motivation have only been accounted for in theories following the domain approach (especially Wigfield & Eccles, 2000). Empirical evidence in this field is still missing and more importantly, no theoretical specification of the cultural influences has been outlined. Table 1 gives a summary of the different approaches.

Table 1

Summary of the three approaches to values

Approach	Entity being valued	Typical research questions	Prominent theories
Object- or task-specific values	Specific objects and actions	What values are assigned to objects/actions and how do they affect the course of action?	Atkinson, 1957 Hidi & Baird, 1986 Deci & Ryan, 2002
Domain values	Domains of actions or objects	How does the valuing of school domains change over the course of time?	Wigfield & Eccles, 2000 Krapp, 2002
General values	Across domains and actions	Are there universal values? How do they affect action selection and performance?	Rokeach, 1973 Hofstede, 1980 Schwartz, 1992 Inglehart, 1997

Values, conflict, and behaviour

If societal values should be incorporated into educational psychology, the first question concerns the contents of the values to be taken into account. Which values are most relevant for the lives and decisions of contemporary students? A set of values linked to typical demands within educational settings is needed. The theory of value change in postindustrialised societies proposed by the political scientist Ronald Inglehart (1977, 1997) might work as a helpful heuristic for the issue. According to this theory, so-called modern values like hard work, security, and prosperity are more and more rivalling with so-called postmodern values like tolerance, being together with friends or self-actualisation. As to Inglehart, modern values, in their reliance on achievement, were originally the driving force of economic development. However, once a high level of economic wealth is reached and is taken for granted by members of the society, the utility of further achievement is no longer seen and postmodern values gain importance. In the world value surveys (compromising large scale studies in 43 countries), Inglehart (1997) could show that during the last 25 years most societies developed in the predicted way.

Since achievement is the core aspect of modern values, whereas well-being is the centre of postmodern values, in this paper modern values will be labelled achievement values and postmodern values will be labelled well-being values. These dimensions are assumed to cover the core values of contemporary students, since these values are connected to the two major fields of students' life: school and leisure. School offers primarily incentives for achievement whereas in leisure time incentives for well-being are dominant (cf. Schmid, Hofer, Dietz, Reinders, & Fries, this volume). Furthermore, there is empirical evidence for a high (and still growing) importance of both types of values for students (Oviada, 2003).

Since values are related to behaviour (cf. Bardi & Schwartz, 2003), it is expected that achievement values should lead to greater school related efforts and thus, to better

performance at school. The opposite should be true for well-being values, being primarily addressed in leisure activities, and thus, interfering with performance at school-related work. In addition, the configuration of achievement and well-being values has to be taken into account. Since values guide behaviour in any action domain, the judgements regarding achievement and well-being will interact when students make decisions. Gensicke (2002) argues that postmodern students are able to completely integrate the two different values. However, on the level of concrete action alternatives these values are likely to come into conflict. These conflicts should be prevalent for students with both, high achievement and high well-being values, since in many situations these values are not compatible and time resources are limited. Consider the example of a student doing his homework. If he/she is called by a friend, who proposes some attractive leisure activity, the student is likely to experience a conflict. Although the described conflict takes place on the level of specific actions, it actually origins from the incompatibility of achievement and well-being values. Such conflicts should linger even after a decision for an activity has been made and result in deteriorated performance, expressing itself in higher distractibility, lower depth of processing, lower persistence, more switching, more rumination, and worsened mood (for a detailed analysis of this phenomenon see Fries, Dietz, & Schmid, submitted).

The analysis of value conflict can be specified by using concepts from attitude research, where attitudinal ambivalence has been intensively discussed (Breckler, 1994; Thompson, Zanna, & Griffin, 1995). In attitudinal ambivalence research, positive and negative aspects of an attitude are distinguished. The amount of conflict is operationalised by formulas for calculating a conflict index. Such formulas can be transferred to the case of two conflicting dimensions, as for instance achievement and well-being values. The transfer is justifiable since the requirements for the indices are the same for attitudinal ambivalence and conflicting values: Firstly, the conflict should increase the smaller the difference between the values. And secondly, the conflict should increase with a higher level of value valences. As Breckler (1994) demonstrated, only two out of several indices meet these requirements. The first index stems from Scott (1966) and the second from Thompson et al. (1995). In the following, the Scott-Index (Formula 1) and the Thompson-Index (Formula 2) are shown. In the formulas a denotes the valence of achievement values and w the valence of well-being values.

$$conflict = \frac{\min(a, w)^2}{\max(a, w)} \qquad \mathbf{1}$$

$$conflict = \frac{\min(a, w) + \max(a, w)}{2} - \left|\min(a, w) - \max(a, w)\right| \qquad \mathbf{2}$$

These formulas allow the scaling of the size of value conflict inherent in a value configuration. The conflict parameters should predict certain behavioural consequences. More specifically, the value conflict should be related to the experience of action conflicts, with students scoring high in value conflict reporting more action conflicts and difficulties in solving them.

Resulting hypotheses

The study to be presented expands a qualitative analysis introduced in Schmid et al. (this volume). Several predictions about the relation of values and value configuration on the one side and aspects of school learning and motivational conflicts on the other side are tested. Whereas the Predictions 1 and 2 are dealing with value configurations, the remaining predictions concern the appreciation of single values. The predictions are as follows:

1. The degree of value conflict – operationalised by a conflict formula – is positively related to the frequency of everyday action conflicts between school and leisure

activities. We have no expectation with respect to relations between the single value orientations and the frequency of school-leisure conflict.

2. Once an action conflict is encountered, the decision between the alternatives should be experienced as more difficult for students with highly conflicting values compared to students with one dominant value orientation.
3. In case of an action conflict, the decision for a school or leisure activity should be related to the student's values. In particular, achievement values should be positively related to decisions for school related activities and negatively to decisions for leisure related activities. For well-being values, the relationship should be vice versa.
4. In case a student decides to perform school-related activities he/she will still be occupied with the consequences of that decision during performance. The intensity of these adverse effects should depend on the strength of the value, which the student attaches to the non-performed action. On the other hand, the intensity of postdecisional conflict should be reduced, if a student acts in accordance with his/her values.
5. As explicated in the predictions 1 to 4, values and value configurations will affect learning through choice and the experience of action conflict during performance. These phenomena will result in systematic relations of values to more general aspects of school learning. Students with higher achievement values should show higher time investment into learning and have better grades than students with high well-being values.

Method

Participants

Participants were 184 students from sixth (69 students), eighth (73 students) and tenth (42 students) grade. The students visited different types of schools within the German school system (Hauptschule: 67, Realschule: 75, Gymnasium: 42)[1]. Their age ranged from 11 to 19 years with a mean age of 13.8 years (*SD*=1.8). Ninety-eight of the participants were boys, 85 were girls (one participant did not specify his/her sex). Fifty-seven students had at least one parent with an immigration history.

Instruments

To measure the constructs relevant for our theoretical considerations, various instruments were developed. Some of them were constructed based on material collected in a qualitative interview study (Schmid et al., this volume). For the value-prototypes and the actional conflict intensity scale, interview statements from the corresponding categories were transformed into items. This was done to ensure that the item content as well as the wording properly reflects the youths' real life. Further scales assessed the frequency of everyday action conflicts, time investment in school, and grades.

Value prototypes. Achievement and well-being values were measured by two descriptions of students representing prototypes with regard to their value orientations (see appendix). The assessment of value orientations by prototypes has turned out to be more feasible for younger students, since it is easily comprehensible (cf. Hofmann, 2003). Participants were asked to evaluate these value prototypes with respect to their dissimilarity/similarity to themselves on a six-point rating scale. Rating scales were presented after the complete descriptions of both prototypes. This kind of assessment was chosen, because it mirrors the procedures commonly used in ambivalence research, where subjects are

asked to evaluate single attitude objects with regard to their positive and negative aspects on separate rating scales (Breckler, 1994). In order to prevent gender effects, the prototypes were presented in gender congruent versions.

Frequency of action conflicts. To obtain a measure of conflict frequency, the students were asked to estimate how often they encountered conflicts between activities in their daily lives. Three questions were constructed with respect to conflicts within as well as between the domains of school and leisure time (school-school, leisure-leisure, school-leisure). Various possible school- and leisure activities were given as examples (e.g., "doing homework", "meeting friends", etc.). The participants gave their answers on five-point scales with labels ranging from "very rarely" to "very often".

Intensity of action conflict. To investigate the relationship of values and value configurations with various features of action conflicts as accurate as possible, vignettes describing concrete conflict situations were used. These vignettes consisted in descriptions of conflict situations involving school- and leisure activities. The first vignette contrasted the activities "learning for an exam" and "meeting friends":

> *"Imagine you are sitting at your desk and are about to start learning for an upcoming exam, as the telephone rings. One of your friends is calling to ask, whether you want to join him and others to do something. He's about to drop by and pick you up."*

In the second conflict, the activities "doing your homework" and "watching TV" were contrasted. Each scenario was followed by two items concerning the decision to be made. Students were asked on four-point scales how difficult a decision would be for them in such a situation and how they would probably decide. Next, two blocks of items were presented. In the first block, students were asked to imagine they had chosen the school-related activity. The students then answered 16 items about their mood and aspects of their performance for that hypothetical case. These items represented different facets of conflict-related performance (distractibility, depth of processing, persistence, switching, mood, and rumination). In the second block, students were asked to imagine they would have chosen the leisure-related activity. Again, students answered questions on their mood and performance, with performance only asking for the aspect of distractibility, since the other aspects were not applicable to leisure activities. Since there were no differential predictions for these facets of performance problems, the items were summed up to one scale per action. The internal consistencies of the resulting conflict scales ranged from .75 to .93.

Time investment and grades. Students were asked for their time investment concerning school-related activities. They rated seven questions regarding time investment in homework, in general preparation, and preparation time for the last math and German exam (Cronbach's α: .69). Moreover, students were asked for their grades in math, German and their first foreign language as a proxy for general achievement. We were accepting the lower validity of such a measure, since an independent measure of achievement could not be realised due to time constraints of testing. As the grades in all three subjects showed an internal consistency of .71 (Cronbach's α) their mean was calculated and used as dependent variable.

Procedure

The complete questionnaire was administered in classroom testing sessions, with no teachers being present. Students were instructed by a trained experimenter and worked for themselves. They were told that the goal of the study was to learn about their attitudes and feelings toward school, leisure, and life in general. Strict anonymity of all data was ensured.

Results

Descriptive analysis

As a first step, the distribution of values in the sample will be described. Both, well-being values and achievement values seem to be highly important for the students: The mean of the similarity ratings for the achievement value prototype fell between the categories "a little bit similar" and "quite similar" (M=3.49; SD=1.18; Range: 0-5). For the well-being value prototype the mean was slightly below the category "a little bit similar" (M=2.91; SD=1.40). Of all students, 43.21% rated themselves as being more similar to the achievement prototype whereas 25.31% rated themselves as being more similar to the well-being prototype; and 31.48% rated themselves as being equally similar to both prototypes. Despite the fact that the ratings for the achievement and well-being prototype were negatively correlated (r=-.30, p<.01), quite a lot of students regarded themselves as being similar to both value prototypes: Using the theoretical mean of the similarity scale (which is 2.5, located between the categories "a little bit dissimilar" and "a little bit similar") as splitting point, 62.35% of the students regarded themselves as more similar than dissimilar to both of the value types. According to our theoretical considerations, these students should be especially prone to encounter action conflicts in their daily lives.

Overall, students reported a frequency of school-leisure conflicts corresponding to the theoretical mean of the scale labelled "sometimes" (M=2.02; SD=1.14; Range: 0-4). Only 11.43% of the students said that they would never experience such conflicts. Intra-school conflicts were about as frequent (M=2.07; SD=1.08) and intra-leisure conflicts even more frequent (M=2.47; SD=0.99) than school-leisure conflicts.

Value configuration and frequency of action conflict

For testing our first hypothesis, Scott's and Thompson's indices were computed for the value prototypes and then correlated with the reported frequencies of action conflicts. Table 2 gives the results.

Table 2

Correlations between value scores, value conflict indices, and the self reported conflict frequency

	Value		Index for value conflict	
Type of action conflict	Achievement	Well-being	Scott	Thompson
School-school	.00	.13	.06	.04
Leisure-leisure	-.09	.25*	.11	.07
School-leisure	-.03	.15	.19*	.17*

Note. *p<.05.

As expected, the indices for the conflict between value prototypes were significantly correlated with the frequency of school-leisure conflicts, although the correlations are rather small. The Scott-Index and the Thompson-Index resulted in r=.19 (p<.05) and r=.17 (p<.05), respectively. Thus, students with similarly high achievement and high well-being values reported more school-leisure conflicts than those students with dissimilar or less important values.

Values and decisions

According to the second hypothesis, it should be easier to solve a school-leisure conflict for students with one value dimension being dominant, regardless of which of the values is dominating. In contrast, students highly appreciating both values should have comparably more trouble in making a decision. Thus, decision difficulty should depend on value configuration. However, concerning the decision itself, we expected that only the values themselves, but not the value conflict should be related (Hypothesis 3). Table 3 summarises the results concerning decision difficulties and decisions.

Table 3

Correlations between values-prototype scores, value conflict indices, decision difficulty and decision

	Value		Index for value conflict	
	Achievement	Well-being	Scott	Thompson
Vignette: "doing homework" *vs.* "watching TV"				
Decision difficulty	.06	.05	.26**	.24**
Decision	-.23**	.29**	-.12	-.06
Vignette: "learning for an exam" *vs*. "meeting friends"				
Decision difficulty	.21**	.06	.19*	.16*
Decision	-.30**	.30**	-.06	-.03

Note. Decisions were scaled such that high values represent decisions in favour of the respective leisure activity while low values represent decisions in favour of the respective school activity; *p<.05, **p<.01.

In fact, the Scott-Index as well as the Thompson-Index were positively correlated with the difficulty of decision for both vignettes (vignette 1: Scott-Index: r=.26, p<.01; Thompson-Index: r=.24, p<.01; vignette 2: Scott-Index: r=.19, p<.05; Thompson-Index: r=.16, p<.05).

As expected, the decision itself was unrelated to both conflict indices. This makes sense, as the actions of students with high value conflict should be more difficult to predict than the actions of students with one of the two value orientations being dominant. In contrast, the decision item was significantly correlated with the prototype value items in the predicted way. Self reported similarity to the achievement value prototype was positively correlated with the probability of decisions favouring the school activity "learning for an exam" in Vignette 1 (r=.23, p<.01) and "doing homework" in Vignette 2 (r=.30, p<.01). Self reported similarity to the well-being value prototype was positively correlated with the probability of decisions favouring the leisure activities "meeting friends" (r=.29, p<.01) and "watching TV" (r=.30, p<.01).

Values and performance

According to the fourth hypothesis, values should be correlated with the performance after a decision for an activity has been reached. To test this hypothesis, value prototypes were correlated with the self-reported performance in the vignettes. Results are given in Table 4.

As can be seen in Table 4, the value prototypes showed the expected significant correlations with conflict-related performance, being measured by asking for distractibility, superficial processing, low persistence, high switching, and bad mood. The more similar students judge themselves to the achievement prototype the less they report impairments during learning and homework. On the other hand, students who perceive themselves as similar to the

well-being prototype report more difficulties during learning and doing homework. Conversely, when students imagined having decided in favour of the leisure activity such as watching TV or going out with friends, achievement-oriented students felt worse whereas well-being oriented students did not suffer from the decision. Considering the generality of assessment via similarity judgements regarding the prototype, the size of the correlations is quite substantial.

Table 4

Correlations between value scores and conflict-related performance

	Value prototype	
Imagined action	Achievement	Well-being
Learning for exam	-.38**	.40**
Meeting friends	.30**	-.25**
Homework	-.21*	.37**
Watching TV	.30**	-.24**

Note. Conflict-related performances were scaled such that high values represent high impairment of performance; *p<.05, **p<.01.

Our last hypothesis concerns the relations between values and general aspects of learning. Achievement values were expected to be positively related to time investment and grades, whereas well-being values should be negatively correlated. Results were in line with the prediction for the value prototype. The reported similarity to the achievement value prototype was positively correlated with time investment (r=.37; p<.01), but not with grades. The reported similarity to the well-being value prototype was negatively correlated with time investment (r=-.21; p<.01) and grades (r=-.28; p<.01).

Discussion

In the reported study the relationship between values and learning was explored. After introducing a differentiation between three separate approaches to the concept of value, we argued that the consideration of societal and corresponding individual values could add to the understanding of school motivation in educational psychology. The analysis started by focusing on the dichotomy of achievement and well-being values, which is crucial for Inglehart's (1997) model of value change. In Western postindustrialised societies, well-being values appear in addition to achievement values dominating in former times. Hence, students have to act according to a multitude of values. These values can be experienced as integrated; however on the behavioural level, the integration of values will not succeed whenever achievement and well-being values cannot be realised at the same time. The main idea underlying our research states that the occurrence of such conflicting value configurations may cause action conflicts. As a matter of fact, most of the students participating in our study scored highly on achievement and well-being values. Results referring to the hypotheses are discussed next.

According to the first hypothesis, action conflicts should arise more frequently in students highly valuing both: achievement and well-being. Students with such a value configuration should be more often confronted with difficulties to decide, whether to work for school or rather spend time on a leisure activity. In order to scale the amount of conflict inherent in a certain value configuration, measures from research on attitudinal ambivalence were applied (Breckler, 1994). Such techniques allow a scaling of the amount of conflict between values, and thus represent an alternative approach to the question of value configuration

(cf. Smith & Schwartz, 1997). The results showed that students with highly conflicting value configurations experience more leisure-school conflicts in their daily lives than students with either a low level on both, achievement and well-being values or with a configuration of substantiall differing values. Besides, students in our sample reported a rather high frequency of school-leisure action conflicts. The same holds true for school-school and leisure-leisure conflicts. These results point towards the necessity for educational psychology to analyse motivational conflicts more thoroughly (cf. Lens, Lacante, Vansteenkiste, & Herrera, this volume).

Furthermore, in line with the second hypothesis, the amount of value conflict was also related to the reported difficulty of making decisions between leisure- and school-related activities. Obviously, the conflict between achievement and well-being values expresses itself not only in the mere frequency of situations that call for decisions between school-related and leisure-related activities, but also in the experienced difficulty of these decisions. Interestingly, the decisional difficulties as well as the frequency of school-leisure conflicts are related only to configurations of values, but not to single value orientations. Thus, it seems adequate to pay attention to specific configurations of values in addition to single value appreciation.

Single values come into play in the third hypothesis stating that in action conflicts students tend to decide in accordance with their dominant value orientation. Here too, the data were in line with the expectation: Students with high achievement values tended to prefer the school related alternative. Those with high well-being values preferred the leisure-related alternative. Taken together, the results for the first three hypotheses support our main idea that a high appreciation of both value orientations has a potential of generating action conflicts in students' everyday lives. Thus, contrary to some authors, a complete value integration (Gensicke, 2002) seems not to depict contemporary students' situation correctly, but at least some of them are facing a problem of value conflict. Moreover, values and value configurations are predicting different aspects of motivation. Whereas value configurations are predicting the experience of decision difficulties in everyday conflicts, the dominant values are related to the results of the decision being made.

Furthermore, the analysis of the fourth hypothesis demonstrated that it is not only the decision but also postdecisional mood and performance, which is systematically related to values. Students with high well-being values reported higher impairments of performance and mood when imagining themselves in the course of a learning activity, whereas students with high achievement values reported performance and mood deteriorations for leisure related activities. Thus, values seem to predict the amount of interference caused by a non-chosen task during the performance of the chosen activity. Finally, values did also predict the amount of time being invested in learning and (at least for well-being values) the students' grades. Taken together, the results of the study support and extend the results from the interview study also published in this issue (Schmid et al.).

Several limitations of our study have to be taken into account. First of all, the correlations reported in this study are mostly of small size, which might cast doubt on their practical meaning. However, one has to consider the broadness of the value construct, which is conceptually and empirically rather distant to aspects of concrete school learning. McClelland even advocates that values are solely self-descriptions without any behavioural relevance (McClelland, 1985). Therefore, it cannot be taken for granted that such a general construct is related to specific behaviour at all. However small the relations between values and behavioural data are, they point to a relevant connection between values and behaviour.

Since all outcome measures used in this study are self-report measures, their validity for real life behaviour might be questioned. Future research should include experimental methods that allow for the analysis of links between values and behaviour under experimentally controlled conditions. Besides, methods for assessing daily events like the experience sampling method or diaries might be useful tools for clarifying the impact of values on everyday life.

The practical implications of our results are disputable for another reason as well. As individual values are rooted in society and considered to be quite stable, they can hardly be

changed by instructional methods. However, environmental changes might help to avoid conflicts. As Eccles and Barber (1999) demonstrated, participation in structured leisure activities is positively related to achievement in school. One reason among others for this relation might be that a highly structured environment offers less potential for action conflicts, rendering their negative consequences less probable.

As values and value configurations are related to learning motivation, the consideration of the value concept seems to be as fruitful in educational psychology as it has been in other areas of psychology. Psychologists usually hesitate to link societal phenomena to individual phenomena, because of the broad gap between these two perspectives. However, values can be analysed on a cultural as well as on an individual level (Smith & Schwartz, 1997), thus, representing a well-suited concept to bridge the explanatory gap between society and the individual. Since education and learning are embedded in societal institutions, educational psychology should incorporate values into its explanatory models in order to balance its purely individualistic stance.

Appendix

Descriptions of students representing value prototypes

(Achievement) For **John** it is mainly important to achieve something in life. He has clear goals he consequently tries to reach. He struggles even through uncomfortable tasks, if his goal is important to him. Then he puts other activities back. John wants to find a good job in the future in which he earns much money and can afford everything he would like to have.

(Well-being) For **Simon** it is above all important to have fun in life and to experience a lot. His favourite way of spending his time is with his friends. They are very important to him. He loves diversion and spontaneous actions. Therefore he avoids committing himself to something or to plan for a longer period of time. If it were according to him life would only consist of free time.

Notes

[1] After four years of primary school German students are allocated to three different types of schools mainly based on their intellectual performance: the five-year Hauptschule and the six-year Realschule preparing for jobs and the nine-year Gymnasium preparing for university.

References

Atkinson, J.W. (1957). Motivational determinants of risk-taking behavior. *Psychological Review, 64*, 359-372.

Bardi, A., & Schwartz, S.H. (2003). Values and behavior: Strength and structure of relations. *Personality and Social Psychology Bulletin, 29*, 1207-1220.

Breckler, S.J. (1994). A comparison of numerical indexes for measuring attitude ambivalence. *Educational and Psychological Measurement, 54*, 350-365.

Deci, E.L., & Ryan, R.M. (Eds.). (2002). *Handbook of self-determination research*. Rochester, New York: University of Rochester Press.

Eccles, J.S., & Barber, B.L. (1999). Student council, volunteering, basketball, or marching band: What kind of extracurricular involvement matters? *Journal of Adolescent Research, 14*, 10-43.

Fries, S., Dietz, F., & Schmid, S. (submitted). Motivational interference: The impact of nonchosen activities on mood and performance.

Gensicke, T. (2002). Individualität und Sicherheit in neuer Synthese? Wertorientierungen und gesellschaftliche Aktivität [Individuality and security in a new synthesis? Value orientations and societal activity]. In Deutsche Shell (Ed.), *Jugend 2002 [Youth 2002]* (pp. 139-212). Frankfurt: Fischer.

Heckhausen, H. (1991). *Motivation and action*. Berlin, Germany: Springer.

Hidi, S., & Baird, W. (1986). Interestingness – A neglected variable in discourse processing. *Cognitive Science, 10*, 179-194.

Hitlin, S., & Piliavin, J. A. (2004). Values: Reviving a dormant concept. *Annual Review of Sociology. 30*, 359-393.

Hofmann, N. (2003). *Value education of youth*. Unpublished doctoral dissertation. University of Potsdam, Germany.

Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Beverly Hills, CA: Sage.

Inglehart, R. (1977). *The silent revolution*. Princeton: Princeton, NJ University Press.

Inglehart, R. (1997). *Modernization and postmodernization*. Princeton, NJ: Princeton University Press.

Jacobs, J.E., Lanza, St., Osgood, D.W., Eccles, J., & Wigfield, A. (2002). Changes in children's self-competence and values: Gender and domain differences across grades one to twelve. *Child Development, 73*, 509-527

Krapp, A. (2002). Structural and dynamic aspects of interest development: Theoretical considerations from an ontogenetic perspective. *Learning and Instruction, 12*, 383-409.

Krapp, A., & Lewalter, D. (2001). Development of interests and interest-based motivational orientations: A longitudinal study in vocational school and work settings. In S. Volet & S. Järvelä, (Eds.), *Motivation in learning contexts: Theoretical advances and methodological implications* (pp. 209-232). Elmsford, New York: Pergamon.

Lens, W., Lacante, M., Vansteenkiste, M., & Herrera, D. (2005). Study persistence and academic achievement as a function of the type of competing motivational tendencies. *European Journal of Psychology of Education, XX*(3), 275-287.

Lewin, K. (1951). *Field theory in social science*. Chicago: University Press.

Markus, H.R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*, 224-253.

McClelland, D.C. (1961). *The achieving society*. Princeton, NJ: Van Nostrand.

McClelland, D.C. (1985). *Human motivation*. Glenview, IL: Scott, Foresman, and Co.

Oviada, S. (2003). Suggestions of the postmodern self: Value changes in American high school students, 1976-1996. *Sociological Perspectives*, *46*, 239-256

Rokeach, M. (1973). *The nature of human values*. New York: Free Press.

Sansone, C., & Harackiewicz, J.M. (Eds.). (2000). *Intrinsic and extrinsic motivation.* San Diego: Academic Press

Schmid, S., Hofer, M., Dietz, F., Reinders, H., & Fries, S. (2005). Value orientations and everyday action conflicts: An interview study. *European Journal of Psychology of Education, XX*(3), 243-257.

Schwartz, S.H. (1992). Universals in the content and structure of values: Theory and empirical test in 20 countries. In M. Zanna (Ed.), *Advances in experimental social psychology* (vol. 25, pp. 1-65). New York: Academic Press.

Scott, W.A. (1966). Measures of cognitive structure. *Multivariate Behavioral Research, 1*, 391-395.

Seligman, C., Olson, J.M., & Zanna, M.P. (Eds.). (1996). *The psychology of values: The Ontario Symposium* (vol. 8). Hillsdale, NJ: Erlbaum.

Smith, P.B., & Schwartz, S.H. (1997). Values. In J.W. Berry, M.H. Segall, & C. Kagitçibasi (Eds.), *Handbook of cross-cultural psychology* (2nd ed., pp. 77-117). Boston: Allyn and Bacon.

Thompson, M.M., Zanna, M.P., & Griffin, D.W. (1995). Let's not be indifferent about (attitudinal) ambivalence. In R.E. Petty & J.A. Krosnick (Eds.), *Attitude strength: Antecedents and consequences* (pp. 361-386). Hillsdale, NJ: Erlbaum.

Urdan, T. (1997). Achievement goal theory: Past results, future directions. In M. Maehr & P. R. Pintrich (Eds.), *Advances in motivation and achievement* (vol. 10, pp. 99-141). Greenwich, CT: JAI Press.

Vollmeyer, R., & Rheinberg, F. (2000). Does motivation affect performance via persistence? *Learning and Instruction, 10*, 293-309.

Wigfield, A., & Eccles, J. (2000). Expectancy-value theory of motivation. *Contemporary Educational Psychology, 25*, 68-81.

Fondé sur l'idée d'Inglehart (1997), que l'importance des valeurs modernes est challengée par les valeurs postmodernes aux sociétés postindustrielles, nous analysons la situation des étudiants contemporains qui cherchent d'intégrer les valeurs (moderne) de puissance et les valeurs (postmoderne) de bien-être. Ces étudiants ont souvent des conflits motivationnelles en choisissant de faire soit le travail pour l'école soit s'engager aux loisirs. Dans une investigation de questionnaire (n=184) étudiants ont montré souvent des scores hauts en valeurs de puissance et en valeurs de bien-être. Le conflit de valeur – mesuré par une formule de conflit – était associé avec la fréquence des conflits motivationnelles et avec la difficulté de choisir quelle action on soit faire. Des valeurs ont prévu les décisions d'étudiants, qu´ils ont pris en relation avec l'école. En plus, les étudiants avec des hautes valeurs de puissance ont indiqué une performance mieux aux devoirs d'école que les étudiants avec des hautes valeurs de bien-être. Finalement, des valeurs étaient associées systématiquement á l'investissement de temps et aux notes.

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Current theme of research:

Societal values and learning motivation. Motivational dynamics and learning. Intrapersonal expectation-effects in learning with media. New media in higher education.

Most relevant publications in the field of Psychology of Education:

Fries, S. (2002). *Wollen und Können* [*To want and to can*]. Münster, Germany: Waxmann.

Fries, S., Lund, B., & Rheinberg, F. (1999). Läβt sich durch gleichzeitige Motivförderung das Training des induktiven Denkens optimieren? [Does simultaneous motive modification optimise the teaching of inductive reasoning]. *Zeitschrift für Pädagogische Psychologie*, *13*, 37-49.

Rheinberg, F., & Fries, S. (1998). Förderung der Lernmotivation: Ansatzpunkte, Strategien und Effekte [Enhancing motivation to learn: Starting points, strategies and effects]. *Psychologie in Erziehung und Unterricht*, *44*, 168-184.

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Current theme of research:

Curiosity. Values and learning motivation. Attitudes

Most relevant publications in the field of Psychology of Education:

Dietz, F., Schmid, S., & Fries, S. (in press). Lernen oder Freunde treffen? Lernmotivation unter den Bedingungen multipler Handlungsoptionen [Learning or meeting friends: Learning motivation in the face of multiple action opportunities]. *Zeitschrift für Pädagogische Psychologie*.

Hofer, M., Reinders, H., Fries, S., Clausen, M., Schmid, S., & Dietz, F. (2005). Ein differentieller Ansatz zum Zusammenhang zwischen Werten und schulischer Lernmotivation [The interrelation of value orientations and motivation to learn in adolescence: A differential approach]. *Zeitschrift für Pädagogik, 51(*3), 326-341.

Schmid, S., Hofer, M., Dietz, F., Reinders, H., & Fries, S. (2005). Value orientations and action conflicts in students' everyday life: An interview study. *European Journal of Psychology of Education, XX*(3), 243-257.

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Current theme of research:

Action conflicts in the field of learning. Societal values and learning motivation.

Most relevant publications in the field of Psychology of Education:

Dietz, F., Schmid, S., & Fries, S. (in press). Lernen oder Freunde treffen? Lernmotivation unter den Bedingungen multipler Handlungsoptionen [Learning or meeting friends: Learning motivation in the face of multiple action opportunities]. *Zeitschrift für Pädagogische Psychologie*.

Fries, S., Dietz, F., & Schmid, S. (submitted). Motivational interference: The impact of alternatives on mood and performance.

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Current theme of research:

Adolescent development. Values and school motivation. Parent-child-interaction.

Most relevant publications in the field of Psychology of Education:

Hofer, M. (1999). Community service and social cognitive development in German adolescents. In M. Yates & J. Youniss (Eds.), *Roots of civic identity. international perspectives on community service and activism in youth* (pp. 114-134). Cambridge: University Press.

Hofer, M. (2003). Forming judgements in the classroom: How do teachers develop expectations of their pupils' performances. In M. Kompf & P.M. Denicolo (Eds.), T*eacher thinking twenty years on: Revisiting persisting problems and advances in education* (pp. 189-196). Lisse, The Netherlands: Swets & Zeitlinger BV.

Hofer, M. (2004). The role of discourse in the transformation of parent-adolescent relationships. In A.-N. Perret-Clermont, C. Pontecorvo, L.B. Resnick, T. Zittoun, & B. Burge (Eds.), *Joining society: Social interaction and learning in adolescence and youth* (pp. 241-251). Cambridge: University Press.

Hofer, M., & Sassenberg, K. (1998). Relationship and family discourse in different situations. In M. Hofer, J. Youniss, & P. Noack (Eds.), *Verbal interaction and development in families with adolescents* (pp. 49-63). Stamford, CT: Ablex.